

REMARKS

Claims 1-27 are pending. Claims 1-27 are rejected. Claim 1, 2, 10-12, 14, 15, 17, 19-21, 24, 25, and 27 are amended. Claims 1-27 remain in the Application. Reconsideration of the pending claims is respectfully requested in view of the amendments and the following remarks.

I. Claim Objections

Claims 19 and 27 are objected to because of the term “machine” in these claims. Applicants respectfully disagree. The specification discloses a processing unit (paragraph 51) which is a machine as recited in these claims. The specification also discloses that instructions can be stored in the memory of computer system (paragraph 53). A computer is a machine. There is no requirement in the law that the claims must use exactly the same language as in the specification. In response to the objections, Applicants replace the term “machine” with “computing device.” Accordingly, reconsideration and withdrawal of the objections to Claims 19 and 27 are respectfully requested.

II. Claims Rejected Under 35 U.S.C. § 112

Claims 24-26 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

With respect to Claim 24, the Examiner indicates that “...the shelves” in the third line of the claim lacks antecedent basis. Applicants delete the rejected term.

The Examiner further indicates that it is unclear whether the “port mapping table” in line 5 of Claim 24 and “mapping table” in the last line of the claim are the same. Applicants amend Claim 24 to insert “port” before the “mapping table” in the last second line of the amended claim. Accordingly, reconsideration and withdrawal of the rejection to Claim 24 and its dependent Claims 25-26 are respectfully requested.

III. Claims Rejected Under 35 U.S.C. § 103(a)

A. Claims 1-7, 10, and 20-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,166,926 issued to Cisneros (“Cisneros”) in view of U.S. Patent No. 6,674,756 issued to Rao (“Rao”) in further view of U.S. Patent No. 6,628,609 issued to Chapman et al. (“Chapman”).

To establish a *prima facie* case of obviousness, the relied upon references must teach or suggest every limitation of the claim such that the invention as a whole would have been obvious at the time the invention was made to one skilled in the art.

Amended Claim 1 includes the element of “wherein the broadcast control cells are transmitted via the switching fabric.” Applicants submit that none of the cited references, separately or combined, teach or suggest this element.

Cisneros discloses a switching fabric 250 coupled to a switch control module 290 that controls the updates of logical-to-physical mapping tables (Fig. 2 and Fig. 3A). The switch control module 290 broadcasts an instruction over leads 337 to update the mapping tables when one of the output modules 270 fails (col. 18, lines 7-12). As shown in Fig. 2 and Fig. 3 of Cisneros, the leads 337 connect interface module 210 directly to the switch control module 290 without passing through the switching fabric 250. The broadcasting as taught by Cisneros is sent via direct connections (leads 337) instead of via the switch fabric 250. Thus, the broadcasting of Cisneros is fundamentally different from the claimed broadcasting. Cisneros does not disclose broadcast control cells are transmitted via the switching fabric.

Rao does not cure the deficiencies of Cisneros. Rao is relied on for disclosing a switch that has ports on shelves. However, Rao does not disclose that broadcast control cells are transmitted via a switching fabric. Rather, Rao discloses the use of an internal management bus 16 for broadcasting system management messages, e.g., hardware management messages (col. 5, lines 21-25, and col. 6, lines 27-30). The management bus 16 is based on a bus technology that is fundamentally different from the claimed switching fabric. Thus, Rao does not disclose transmitting broadcast control cells via the switching fabric.

Moreover, Chapman also does not cure the deficiencies of Cisneros and Rao. Chapman is relied on for disclosing the association of line ingress queues with logical ports. However, Chapman does not mention broadcasting of broadcast control cells. The Examiner has not identified and Applicants have been unable to discern any part of Chapman that discloses transmitting broadcast control cells via the switching fabric.

Further, the combination of Cisneros, Rao, and Chapman would not produce the claimed method. Cisneros teaches using direct connections to broadcast updates. Assuming, for the sake of argument, that a switch control module 290 is provided on every shelf to provide service

modularity, the broadcasts from one switch control module to all ports on all shelves would, in accordance with the teachings of the relied upon art references, require a direct connection between the switch control module and all these other ports and shelves. Such configuration would not be scalable, because the wiring complexity increases dramatically with the number of ports and shelves in the system. By contrast, Applicants' claimed method is highly scalable because it uses the switching fabric to transport the broadcast control cells.

For the foregoing reasons, Cisneros in view of Rao and further in view of Chapman do not teach or suggest each of the elements of amended Claim 1.

Analogous discussions apply to independent Claim 20, which is amended to include a similar limitation of "wherein the updates of the logical to physical port mappings are transmitted via the switching fabric." Claims 2-7, 10, and 21-23 depend from Claims 1 and 20, respectively, and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claims 1 and 20, the cited references do not teach or suggest each of the elements of these dependent claims. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claims 1-7, 10, and 20-23 are requested.

B. Claims 8 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cisneros in view of Chapman and Rao as applied to Claim 1, and further in view of U.S. Patent No. 6,738,828 issued to Keates et al ("Keates").

Claims 8 and 9 depend from independent Claim 1 and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claim 1, Cisneros in view of Chapman and Rao does not teach or suggest each of the elements of these claims.

Keates does not cure the deficiencies of Cisneros, Chapman, and Rao. Keates is relied on for disclosing shelf managers. However, Keates does not disclose broadcasting of broadcast control cells to all ports on all shelves. Rather, Keates discloses a SONET ring that connects network elements, each of the network elements including a shelf controller 50. The Examiner characterizes the shelf controller 50 as the claimed shelf manager. However, the shelf controller 50 communicates with other network elements via a ring, instead of a switching fabric. Thus, even assuming, for the sake of argument, that the shelf controller 50 of Keates controls broadcasts, the broadcasting of cells to all ports on all shelves would be via a ring instead of the

claimed switching fabric. Thus, Keates does not disclose transmitting broadcast control cells via the switching fabric.

For the foregoing reasons, the cited references, separately or combined, do not teach or suggest each of the elements of Claims 8 and 9. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claims 8 and 9 are requested.

C. Claims 11, 12, 15, 18, and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cisneros in view of Chapman.

Independent Claims 11, 15, and 19 are amended to include the element of “wherein the broadcast(ing) is via the switching fabric.” Thus, for analogous reasons mentioned above in regard to Claim 1, Cisneros in view of Chapman does not teach or suggest each of the elements of these claims.

Claims 12 and 18 depend from Claims 11 and 15, respectively, and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claims 11 and 15, Cisneros in view of Chapman does not teach or suggest each of the elements of these dependent claims. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claims 11, 12, 15, 18, and 19 are requested.

D. Claims 13 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cisneros in view of Chapman as applied to Claims 11 and 15 above, respectively, and further in view of U.S. Publication No. 2002/0103921 issued to Nair et al. (“Nair”).

Claims 13 and 16 depend from Claims 11 and 15, respectively, and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claims 11 and 15, Cisneros in view of Chapman does not teach or suggest each of the elements of these dependent claims.

Nair does not cure the deficiencies of Cisneros and Chapman. Nair is relied on for disclosing managing logical fabric ports globally. However, Nair does not mention broadcasting of broadcast control cells. The Examiner has not identified and Applicants have been unable to discern any part of Nair that discloses transmitting broadcast control cells via the switching

fabric. Thus, the cited references, separately or combined, do not teach or suggest each of the elements of Claims 13 and 16. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claims 13 and 16 are requested.

E. Claims 14, 17, and 27 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cisneros in view of Chapman as applied to Claims 11, 16, and 19 above, respectively, and further in view of Rao.

Claims 14, 17, and 27 depend from Claims 11, 15, and 19, respectively, and incorporate the limitations thereof. Independent Claims 11, 15, and 19 are amended to include the element of “wherein the broadcast(ing) is via the switching fabric.” Thus, for analogous reasons mentioned above in regard to Claim 1, Cisneros in view of Chapman and further in view of Rao does not teach or suggest each of the elements of these independent claims and their respective dependent claims, namely, Claims 14, 17, and 27. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claims 14, 17, and 27 are requested.

F. Claims 24-26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cisneros in view of Rao, Chapman, and Keates.

Independent Claim 24 is amended to overcome the § 112, second paragraph rejection as mentioned above. Additionally, Claim 24 is amended to include the element of “wherein the broadcast control cells are transmitted via the switching fabric.” Thus, for analogous reasons mentioned above in regard to Claim 1, Cisneros in view of Chapman and Rao does not teach or suggest each of the elements of Claim 24.

Keates does not cure the deficiencies of Cisneros, Chapman, and Rao. Keates is relied on for disclosing shelf managers. However, as mentioned above in regard to Claims 8 and 9, Keates does not disclose broadcasting of broadcast control cells to all ports on all shelves. Thus, the cited references, separately or combined, do not teach or suggest each of the elements of Claim 24 and its dependent Claims, namely, Claims 25 and 26. Accordingly, reconsideration and withdrawal of the § 103 rejection of Claims 24-26 are requested.


CONCLUSION

In view of the foregoing, it is believed that all claims are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Respectfully submitted,

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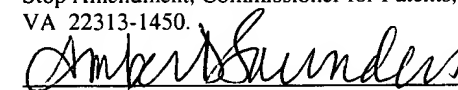
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